

A Cowrie Mutant from the Gulf of Thailand

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(1 Text figure)

MUTANTS ARE HEREDITARY VARIANTS which differ from typical specimens by one or a few striking characters; there are no, or only rare, intermediates. The mutants live among the not-varied individuals of the same species and do not show any environmental specialization. They show a distinct center of frequency and become gradually scarcer in populations living around this locality. True mutants differ from morphes (SCHILDER, 1966, p. 185) by their area of distribution being still very restricted, if compared with that of the typical species.

In cowries such local mutants evidently are very rare, as only three variants can be classified in this way: *Ovatipsa chinensis tortirostris* (SOWERBY, 1906) from South Africa (see SCHILDER, 1966, p. 186), *Lyncina carneola titan* SCHILDER & SCHILDER, 1962 from southern Kenya (established as a distinct species), and *Erronca erronea azurea* SCHILDER, 1968, from Broome.

Recently a fourth case has been disclosed by several series of cowries presented to me chiefly by Mr. J. Orr and Mr. Franz B. Steiner: *Mauritia arabica* LINNAEUS, 1758, which formerly was thought to be represented by a single race in the Gulf of Thailand (SCHILDER, 1965, p. 26), has proved to consist of two well separable variants along the east coast of the interior part of this Gulf.

The primary *Mauritia arabica* is mostly small, oblong to ovate, and rather depressed; in shells from the northern Gulf of Thailand the length usually (i. e. in 67% of shells approaching the mean) varies from 43 to 55 mm, the usual breadth from 60 to 62% of length, and the usual height from 48 to 51% of length.

These shells belong to the subspecies *Mauritia arabica asiatica* SCHILDER & SCHILDER, 1939 (ranging from Japan to the Gulf of Thailand) if this "race" really can be separated from the Malayan typical *M. a. arabica* by its lips being more acuminate chiefly at the rear.

The mutant is larger and broader, as its usual length varies from 53 to 66 mm and its breadth from 64 to 69% so that the means differ in a significant way; besides, the outline of the base is rather deltoidal (instead of elliptical) and the dorsum is humped, viz. relatively higher (usually 52 to 55% of length, the mean being 54 instead of 50%) and its top is displaced to the rear of the shell so that the shells recall *Troca stercoraria* (LINNAEUS, 1758) in shape (Figure 1). The brown dorsal longitudinal striae are evidently far less interrupted by pale lacunae than it is in the other races of *Mauritia arabica*.

This mutant should be called *Mauritia arabica gibba* COEN, 1949 (see SCHILDER, 1964, p. 104) in spite of the inaccurate type locality "China Sea": for this region also includes the Gulf of Thailand, and COEN's indications of habitat were mostly uncertain or even false.

The extremely broad and callous *Mauritia arabica dilatata* COEN, 1949 (see *loc. cit.*) becomes a synonym of *M. a. gibba* as it applies to an individual variant of which several specimens have been collected in the populations of the more frequent and less extreme *M. a. gibba*.

The center of distribution of *Mauritia arabica gibba* evidently lies in the islands of the Ko Sichang group (about 70 km SE of Bangkok), especially in Ko Taitamun (see map in Figure 1); here and in the Ko Khrok group (opposite of Pattaya) only has *M. a. gibba* been collected as yet, but no *M. a. arabica*. On the beaches of the mainland, however, from Pattaya to east of Rayong both *M. a. arabica* and *M. a. gibba* have been collected, e. g. in Ban Pe (Bang Pae) and in Ban Klaeng Lang, where the specimens of the species *M. arabica* include 75% and 68% respectively *M. a. gibba*. Farther east, i. e. at Laem Sing and in the Ko Chang group no *M. a. gibba* have been collected at all, as it is, according to Mr. J. Orr, the case also in the whole west coast of the Gulf of Thailand (Hua Hin, Chumporn, Songkla).